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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.     | CONFIRMATION NO.       |
|--|-------------|----------------------|-------------------------|------------------------|
| 09/673,440   | 11/20/2000  | Masato Shimakawa     | 450101-02342            | 5342                   |
| 20999 7590 09/25/2007<br>FROMMER LAWRENCE & HAUG<br>745 FIFTH AVENUE- 10TH FL.<br>NEW YORK, NY 10151 |             |                      | EXAMINER<br>VO, HUYEN X |                        |
|  |             |                      | ART UNIT<br>2626        | PAPER NUMBER           |
|  |             |                      | MAIL DATE<br>09/25/2007 | DELIVERY MODE<br>PAPER |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/673,440

Applicant(s)

SHIMAKAWA ET AL.

Examiner

Huyen X. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 35-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection in view of Kutsumi et al. (US 5625553), necessitated by claim amendment.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 35-39, 43-44, 51-55, and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (5,826,220) in view of Kutsumi et al. (US 5625553).

4. As to claim 35, Takeda et al. disclose a translation method for translating source language sentence data to target language data comprising:

accessing the source language sentence data (*translating original sentences in a first language col. 3 lines 8-9*);

accessing translation information (*col. 3 lines 8-11*);

wherein the translation information (translation dictionary) includes one descriptor (headword) describing the source (first) language sentence data, corresponding target (second) language sentence data (*translation dictionary storing headwords in the first*

*language and candidate translation word 'in the second language, col. 3 lines 10-14), and related information (lexical rules) that limits the applicability of the target (second) language sentence data to the source language sentence data (candidate translation) (candidate translation word in the second language corresponds to each lexical rules, col. 3 lines 10-14; the lexical rules are what limits the possible candidate translation);*

*determining a relationship between the source language sentence data and the translation information (translation dictionary) (Fig. 12, elements e-d, "sentence structure"; the sentence structure for the original and translated sentences are compared, thus a determination of the relationship between the source and translation information is established by analyzing the syntactic structure of the potentially matching translation, the corresponding translation is obtained through the translation dictionary);*

*generating one candidate as a function of the translation information (translation dictionary) and the relationship between the source language sentence data and the translation information (translation dictionary)(Fig. 27; the "Candidate Translation Word" is a function of the translation dictionary and the relationship between the source language sentence data (under "Headword") and the translation dictionary (under "Candidate Translation Word")); and*

*determining applicability of each translation candidate to the source language data (Fig. 28-29; under "examine " and "inspect", the applicability of each translation candidate to the source is checked); and*

modifying translation information in accordance with the determined applicability of each translation candidate to the source language sentence data (*a change of a translation word from that obtained by the machine translation word specified by a user is learned by registering a learning data indicating a headword, a top candidate translation word corresponding to a lexical rule applied in translating this headword, and the specified translation word, only when an original word and a top candidate translation word for this original word obtained by the machine translation coincide with the headword and the top candidate translation word, Abstract; thus the applicability is conducted via the candidate selection process*);

wherein the translation of the next sentence is a function of the modified translation information (*col. 12 lines ! 8-24; col. 2 line 65-col. 3 line 5; modifying or changing a translation word using the updated translation information*).

Takeda et al. do not explicitly disclose limiting a number of translation candidates generated by limiting the translation information used in generating the translation candidates in accordance with field information comprising information related to a current field of conversation and limited information limiting translation information generated during the current field of conversation, and wherein a translation of the next source language sentence is a function of the modified and limited translation information. However, Kutsumi et al. teach limiting a number of translation candidates generated by limiting the translation information used in generating the translation candidates in accordance with field information comprising information related to a current field of conversation and limited information limiting translation information

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generated during the current field of conversation, and wherein a translation of the next source language sentence is a function of the modified and limited translation information (col. 7, line 65 to col. 8, line 67, in example "I play the piano", the word "play" has different multiple meanings. Appropriate meaning is selected based on analyzed context of the sentence. This would limit the number of translation candidates and improve translation accuracy).

Since Takeda et al. and Kutsumi are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Takeda et al. by incorporating the teaching of Kutsumi et al. in order to improve language translation accuracy.

5. As to claim 51, Takeda et al. disclose a translation apparatus (dictionary, Abstract) comprising:

input means for entering source language sentence data (Fig. 10);

storage means for storing translation information (col. 5 lines 14-20);

wherein translation information includes one or more descriptor describing the source language sentence data, the corresponding target language sentence data, and related information that limits the applicability of the target language sentence data to the source language sentence data (col. 3 lines 1.0-14; lexical rules and candidate selections are used to limit or filter data);

analysis means for determining, according to said translation information, a relationship between source language sentence data and the translation information,

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thereby analyzing said source language sentence data and generating one or more translation result candidates (col. 3 lines 10-14 and Figs. 10, 12-14);

target language sentence generation means for generating said target language sentence data as a translation of said source language sentence data (Figs. 10, 12-14);

modifying means for modifying translation information in accordance with a determined applicability of each translation candidate to the source language sentence data (*a change of a translation word from that obtained by the machine translation word specified by a user is learned by registering a learning data indicating a headword, a top candidate translation word corresponding to a lexical rule applied in translating this headword, and the specified translation word, only when an original word and a top candidate translation word for this original word obtained by the machine translation coincide with the headword and the top candidate translation word, Abstract*);

wherein the translation of the next sentence is a function of the modified translation information (col. 12 lines 18-24; col. 2 line 65-col. 3 line 5; modifying or changing a translation word using the updated translation information); and

output means for outputting said target language sentence data generated by said target language sentence generation means (Figs. 10, 12-14).

Takeda et al. do not explicitly disclose limiting a number of translation candidates generated by limiting the translation information used in generating the translation candidates in accordance with field information comprising information related to a current field of conversation and limited information limiting translation information generated during the current field of conversation. However, Kutsumi et al. teach

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limiting a number of translation candidates generated by limiting the translation information used in generating the translation candidates in accordance with field information comprising information related to a current field of conversation and limited information limiting translation information generated during the current field of conversation (*col. 7, line 65 to col. 8, line 67, in example "I play the piano", the word "play" has different multiple meanings. Appropriate meaning is selected based on analyzed context of the sentence. This would limit the number of translation candidates and improve translation accuracy*).

Since Takeda et al. and Kutsumi are analogous art because they are from the same field of endeavors, it would have been obvious to one of ordinary skill in the art at the time of invention to modify Takeda et al. by incorporating the teaching of Kutsumi et al. in order to improve language translation accuracy.

6. As to claims 36 and 52, which depends on claims 35 and 51, Takeda et al. teach related information supports an interpretation of a meaning of said target language sentence data corresponding to said source language sentence data accessed (col. 3 lines 10-15; translation based on lexical rules in translation dictionary, which is inherent to interpretation of a meaning of target language sentence).

7. As to claims 37 and 53, which depends on claims 36 and 52, Takeda et al. teach related information contains a check source language sentence as a variation of said target language sentence data corresponding to said source language sentence data



accessed (Fig. 25A-C and Fig. 27; lexical rules or related information contains 'check source language which corresponds with the 'candidate translation word' or target language, translating words is inherent to the process of translating sentences).

8. As to claims 38 and 54, which depends on claims 37 and 53, Takeda et al. teach a description of said check source language sentence is omitted in said translation information when said source language sentence data matches the check source language sentence that is described in the translation information (Fig. 12; "Subject" "Object" and "Definitive" are omitted in element e, the Translated sentence Syntactic Structure" when there is a match, see a-c, J2 in element b was chosen and the object "transportation means" is omitted).

9. As to claim 39 and 55, which depends on claims 37 and 53, Takeda et al. teach wherein related information includes atleast one of a status explaining sentence in said source language that explains the status where said check source language is used (Fig. 12 elements a-c; the "Object ....Transportation means" are status explaining in source language regarding were the check source language is used, such as in Fig. 25 A-C).

10. As to claim 43, which depend on claim 35, Takeda et al. teach the translation method as claimed in claim 35, further comprising the steps of: determining whether a translation result of said source language sentence data is a corresponding target

language sentence data in accordance with said related information (Fig. 20B; the flow chart is an example of verification process that the translation result matches the source in accordance with related information or lexical rules (lexical rules are part of candidate translation process in element 719); and reporting that said source language sentence data cannot be translated when no target language sentence data corresponds to said source language sentence data based on said related information (when there is no appropriate translation word in the display list at step 717, the user presses a registration key, the system is switched to a translation word input mode, col. 11 lines 39-44; the method of switching from the list to the registration key is necessarily reporting that there isn't a translation, thus the need to update the system by registering the new word).

11. As to claims 44 and 60, which depend on claims 35 and 51, Takeda et al. teach wherein target language sentence data is accessed and translated into the source language sentence data (Fig. 12).

12. Claims 40-42, 45-46, 49-50, 56-59, 61-62, and 65-66 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (5,826,220) in view of Kutsumi et al. (US 5625553), and further in view of Fukumochi et al. (5321607).

13. As to claims 40 and 56, which depend on claims 35 and 51, Takeda et al. teach related information Takeda et al. do not explicitly teach prediction of next source

language. However, Fukumochi et al. do teach predicted next source language sentence data based on the source language sentence that has been accessed (Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s predict next source language sentence based on the source language sentence for interpreting sentences into the method of Takeda et al., because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

14. As to claims 41 and 57, which depend on claims 35 and 51, Takeda et al. do not explicitly teach field information for limiting predicted next source language sentence. However, Fukumochi et al. do teach field information that is used for limiting predicted next source language sentence data (col. 3 lines 58-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s limit field information into the method of Takeda et al. because Fukumochi et al. teach that this would permit a user to easily limit each part for selecting an appropriate translation thereof independently of other parts if a plurality of parts which can be interpreted in a plurality of ways are presented in an original sentence, col. 3 lines 45-51.

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15. As to claims 42 and 58, which depend on claims 35 and 51, Takeda et al. teach wherein said related information includes source language sentence (Fig. 25A-C and Fig. 27). Takeda et al. do not explicitly teach response sentence prediction. However, Fukumochi et al. do teach at least one of a response sentence that necessarily predicts a response to said source language sentence data (Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s predict next source language sentence based on the source language sentence for interpreting sentences into the method of Takeda et al., because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

16. As to claim 59, which depend on claim 58, Takeda et al. teach the translation method as claimed in claim 35, further comprising the steps of: determining whether a translation result of said source language sentence data is a corresponding target language sentence data in accordance with said related information (Fig. 20B; the flow chart is an example of verification process that the translation result matches the source in accordance with related information or lexical rules (lexical rules are part of candidate translation process in element 719); and reporting that said source language sentence data cannot be translated when no target language sentence data corresponds to said source language sentence data based on said related information (when there is no appropriate translation word in the display list at step 717, the user presses a

registration key, the system is switched to a translation word input mode, col. 11 lines 39-44; the method of switching from the list to the registration key is necessarily reporting that there isn't a translation, thus the need to update the system by registering the new word).

17. As to claims 45 and 61, which depend on claims 44 and 60, Takeda et al. teach wherein said related information. Takeda et al. do not explicitly teach predicting the next target language sentence data. However, Fukumochi et al. do teach includes predicted next target language sentence data based on the target language sentence that has been accessed (Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s predict next source language sentence based on the source language sentence for interpreting sentences into the method of Takeda et al., because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

18. As to claims 46 and 62, which depend on claims 44 and 60, Takeda et al. teach related information. Takeda et al. do not explicitly teach limiting prediction of next target language sentence based on the accessed source language sentence. However, Fukumochi et al. do teach wherein said related information includes field information

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that is used for limiting predicted next target language sentence data based on the source language sentence data that has been accessed (col. 3 lines 58-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s limit field information into the method of Takeda et al. because Fukumochi et al. teach that this would permit a user to easily limit each part for selecting an appropriate translation thereof independently of other parts if a plurality of parts which can be interpreted in a plurality of ways are presented in an original sentence, col. 3 lines 45-51.

19. As to claims 49 and 65, which depend on claims 35 and 51, Takeda et al. do not explicitly teach response prediction. However, Fukumochi et al. do teach wherein response prediction information is generated in response to said source language sentence data accessed, and the response prediction information that is generated is presented (col. 3 lines 58-67 and Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s limit field information into the method of Takeda et al. because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

20. As to claims 50 and 66, which depend on claims 49 and 65, Takeda do not explicitly teach response prediction. However, Fukumochi et al. do teach wherein said

response prediction information includes at least one of a response described as said related information in the translation information corresponding to said source language data (col. 3 lines 58-67 and Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s limit field information into the method of Takeda et al. because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

21. Claims 47-48 and 63-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al. (5,826,220) in view of Kutsumi et al. (US 5625553), as applied to claims 35 and 51 above, in further view of Kleinschmidt et al. (6,085,112).

22. As to claims 47 and 63, which depends on claims 35 and 51, Takeda et al. teach source and target language. Takeda et al. in view of Fukumochi et al. does not explicitly teach voice input or voice output. However, Kleinschmidt et al. do teach wherein said source language sentence data is accessed and recognized as voice data and said target language data is generated and output as voice data (speech input and output means, foreign translation within scope of communication device, col. 3 lines 35-37 and col. 4 lines 64-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Kleinschmidt et al.'s process source and translated

language as input and output into the method of Takeda et al. in view of Fukumochi et al., because an artisan of ordinary skill in the art would permit commands to be issued to the device without using hands and/or permits message from the device to be perceived without the eyes, (Kleinschmidt et al. col. 3 lines 35-40).

23. As to claims 48 and 64, which depends on claims 47 and 63, Takeda do not explicitly teach predicting the next source sentence. However, Fukumochi et al. do teach predicted next source language sentence data based on the source language sentence data that has been accessed (col. 3 lines 58-67 and Figs. 14 and 17).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Fukumochi et al.'s limit field information into the method of Takeda et al. because Fukumochi et al. teach this would provide a representation showing how the next candidate translation for the designated range is displayed, col. 5 lines 18-21.

Takeda et al. in view of Fukumochi et al. do not explicitly teach including predicting the next source language sentence or voice recognition. However, Kleinschmidt et al. do teach voice recognition (speech recognition, col. 8 line 56).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement Kleinschmidt et al.'s limit field information via voice recognition into the method of Takeda et al. in view of Fukumochi et al., because Kleinschmidt et al. teach that would permit commands to be issued to the device without



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using hands and/or permits message from the device to be perceived without the eyes, (Kleinschmidt et al. col. 3 lines 35-40).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen X. Vo whose telephone number is 571-272-7631. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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